

LISTING OF CLAIMS

1. (original) A magnetic force generator comprising:
 - a shell internally defining an armature chamber having an axis;
 - at least two circumferential electric coils spaced axially within the chamber;
 - an armature supported in the chamber for reciprocation on the axis, the armature including at least two axially spaced permanent magnets mounted on an axially extending steel magnetic tube;
 - resilient members nominally centering the armature in the chamber;
 - the permanent magnets extending axially, inwardly adjacent and in general alignment with the electric coils;
 - the magnets having radially extending flux lines passing through the coils;
 - and
 - controlled energizing of the coils being operative on the permanent magnets to reciprocate the armature axially in a controlled manner relative to the shell to develop an opposite inertia force on the shell for application to a connected body.
2. (original) A magnetic force generator as in claim 1 wherein the magnets are cylindrical.
3. (original) A magnetic force generator as in claim 1 wherein the resilient members are compression springs.
4. (original) A magnetic force generator as in claim 1 wherein the shell is part of a housing including non-magnetic ends closing the chamber.

5. (original) A magnetic force generator as in claim 1 wherein the shell is formed of material which carries magnetic flux.

6. (original) A magnetic force generator as in claim 5 wherein the shell material is carbon steel.

7. (original) A magnetic force generator as in claim 1 wherein the armature has end caps formed of a non-magnetic material.

8. (original) A magnetic force generator as in claim 1 wherein the magnets are formed of a suitable magnetic material.

9. (original) A magnetic force generator as in claim 8 wherein the magnetic material is ferrite.

10. (original) A magnetic force generator as in claim 1 wherein the magnets are radially magnetized in opposite directions.

11. (original) A magnetic force generator as in claim 1 wherein the coils are wound in opposite directions.

12. (original) A magnetic force generator as in claim 1 wherein the axial length of the coils is generally similar to the axial length of the magnets.

13. (new) A magnetic force generator comprising:
a shell internally defining an armature chamber having an axis;
at least two circumferential electric coils spaced axially and fixed within the chamber;

an armature supported in the chamber for reciprocation on the axis, the armature including at least two axially spaced permanent magnets fixedly mounted on an axially extending magnetic tube;

resilient members nominally centering the armature in the chamber;

the permanent magnets extending axially, inwardly adjacent and in general alignment with the electric coils;

the magnets being radially magnetized and generating radially extending flux lines passing through the coils; and

controlled energizing of the coils being operative on the permanent magnets to reciprocate the armature axially in a controlled manner relative to the shell to develop an opposite inertia force on the shell for application to a connected body.

14. (new) A magnetic force generator as in claim 13 wherein the shell is part of a housing including non-magnetic ends closing the chamber.

15. (new) A magnetic force generator as in claim 13 wherein the shell is formed of material which carries magnetic flux.

17. (new) A magnetic force generator as in claim 13 wherein the armature has end caps formed of a non-magnetic material.

18. (new) A magnetic force generator as in claim 13 wherein the magnets are radially magnetized in opposite directions.

19. (new) A magnetic force generator as in claim 13 wherein the coils are wound in opposite directions.

20. (new) A magnetic force generator as in claim 13 wherein the axial length of the coils is generally similar to the axial length of the magnets.